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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,141	12/31/2003	Masumi Kubo	4034-42	6878
23117	7590	05/24/2004		
NIXON & VANDERHYE, PC 1100 N GLEBE ROAD 8TH FLOOR ARLINGTON, VA 22201-4714			EXAMINER CHOWDHURY, TARIFUR RASHID	
			ART UNIT 2871	PAPER NUMBER

DATE MAILED: 05/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/748,141

Applicant(s)

KUBO ET AL.

Examiner

Tarifur R Chowdhury

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 12-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/919,839.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01/14/04.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No.

09/919,839, filed on 08/02/01. **Specification**

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**6. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al., (Yoshida), USPAT 6,222,599 in view of Wu, USPAT 5,260,818.**

7. Yoshida discloses a liquid crystal display device comprising: first substrate (Fig. 1A #14, col. 5, lines 50-54); second substrate (Fig. 1A, col. 5, lines 50-54); a liquid crystal layer disposed between the first substrate and the second substrate (Fig. 1A, #16, col. 6, lines 1-5); and a plurality of picture element regions each defined by a first electrode provided on a face of the first substrate facing the liquid crystal layer and a second electrode provided on the second substrate so as to oppose the first electrode layer via the liquid crystal layer sandwiched therebetween, wherein the first electrode includes a solid portion and a plurality of openings in each of the plurality of picture element regions (Figs. 3b, 4-5, 15 etc., col. 7, lines 12-29, 59-60, col. 9, lines 21-39) the liquid crystal layer is in a vertical orientation state in each of the plurality of picture element regions when no voltage is applied between the first electrode and the second electrode (Fig. 3A, etc., col. 7, lines 30-33), when a voltage is applied between the first electrode and the second electrode, a plurality of liquid crystal domains each in a radially-inclined orientation state are formed in the plurality of openings (Figs. 1B, 3B, etc., and col. 7, lines 33-35) and the solid portion by inclined electric fields generated at respective edge portions of the plurality of openings of the first electrode (col. 7, lines 35-42), for producing a display by changing orientation states of the plurality of liquid crystal domains in accordance with the applied voltage (Fig. 3 and col. 7, lines 40-45).

Yoshida differs from the claimed invention because he does not explicitly disclose that the solid portions includes a plurality of sub-electrodes and a plurality of contact portions each for mutually electrically connecting at least some of the sub-electrodes.

Wu discloses a liquid crystal display wherein the pixel electrode includes a plurality of sub-electrodes and a plurality of contact portions each for mutually connecting at least some of the sub-electrodes (Fig. 3, col. 2, lines 50-57). Wu also discloses that such an structure is advantageous since it is capable of repairing point defect (col. 2, lines 33-34).

Wu is evidence that ordinary workers in the art would find a reason, suggestion or motivation to have plurality of sub-electrodes and a plurality of contact portions each for mutually electrically connecting at least some of the sub-electrodes.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display device of Yoshida by substituting the first electrode with an electrode wherein the solid portion includes plurality of sub-electrodes and a plurality of contact portions each for mutually electrically connecting at least some of the sub-electrodes so that the display device is capable of repairing point defect.

Accordingly, claim 12 would have been obvious.

As per claim 13, Yoshida also discloses that wherein at least some of the plurality of openings have substantially the same shape and the same size, and form at

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least one unit lattice arranged so as to have rotational symmetry (Figs. 4-5, col. 3, lines 17-22, col. 7, lines 58-63, col. 8, lines 1-10).

As per claim 14, Yoshida also discloses that wherein each of the at least some of the plurality of openings is in a rotationally symmetrical shape (Fig. 4-5, col. 7, lines 58-63, col. 8, lines 1-10).

**8. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida and Wu and further in view of Uemura et al., (Uemura), USPAT 5,636,043.**

9. As per claims 15 and 16, Yoshida differs from the claimed invention because he does not explicitly disclose that the plurality of openings is in a substantially circular shape.

Uemura discloses (Fig. 1, #110 and col. 4, lines 65-67; col. 6, lines 38-43) plurality of openings in substantially circular shape to form a device with easier elimination of orientation-related defect during application of high voltage, having no indication of surface roughness and having an improved display quality with its arrangement of polarizing element optimized.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include Uemura's circular shaped openings instead of the openings described by Yoshida's device to form a device with easier elimination of orientation-related defect during application of high voltage, having no indication of surface roughness and having an improved display quality with its arrangement of polarizing elements optimized (col. 4, lines 23-29).

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As per claim 17, Uemura also shows in Fig. 1 that wherein each of the plurality of picture element regions, a total area of the at least one opening of the first electrode is smaller than an area of the solid portion of the first electrode.

### ***Double Patenting***

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claim 12 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/307,432. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claim is anticipated by the claim 1 of the copending application 10/307,432.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

12. Claims 12-18 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 and 5-8 of copending Application No. 09/923,344 in view of Wu.

The co-pending discloses all the limitations of the instant claims except that the solid portions includes a plurality of sub-electrodes and a plurality of contact portions each for mutually electrically connecting at least some of the sub-electrodes.

Wu discloses a liquid crystal display wherein the pixel electrode includes a plurality of sub-electrodes and a plurality of contact portions each for mutually connecting at least some of the sub-electrodes (Fig. 3, col. 2, lines 50-57). Wu also discloses that such an structure is advantageous since it is capable of repairing point defect (col. 2, lines 33-34).

Wu is evidence that ordinary workers in the art would find a reason, suggestion or motivation to have plurality of sub-electrodes and a plurality of contact portions each for mutually electrically connecting at least some of the sub-electrodes.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display device of copending application 09/923,344 by employing an electrode wherein the solid portion includes plurality of sub-electrodes and a plurality of contact portions each for mutually electrically connecting at least some of the sub-electrodes so that the display device is capable of repairing point defect.

This is a provisional obviousness-type double patenting rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (571) 272-2287. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

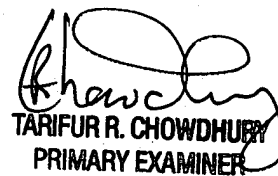


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRC  
May 19, 2004

  
TARIFUR R. CHOWDHURY  
PRIMARY EXAMINER